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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/743,846

12/22/2003

David W. Park

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06/21/2006

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EXAMINER

CORDRAY, DENNIS R

ART UNIT

PAPER NUMBER

1731

DATE MAILED: 06/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,846

Applicant(s)

PARK ET AL.

Examiner

Dennis Cordray

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4 docs</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: On p 3, line 26 the word "pape" should be changed to "paper."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 recites the limitations of "low viscosity" and "low hygroscopicity," but does not provide any measure for determining what is meant by the limitations. The Specification defines "low hygroscopicity" on p 3, lines 8-9 to mean "the dried material will take up only a small amount of water in high humidity conditions." On p 5, lines 28-29, the term is redefined to mean "the dried material will not take up water in high humidity conditions." The two definitions are contradictory to each other. Either the material will take up some water or it will not, but both conditions cannot occur simultaneously.

"Low viscosity" is defined in the Specification on p 3, lines 6-7 and p 5, lines 27-28 to mean 200 centipoise or less for a solution of material at 20-50% concentration by

Art Unit: 1731

weight, but does not define the conditions under which the viscosity is measured. Since viscosity is a function of at least temperature and frequently of shear rate, the claim does not provide sufficient information for one skilled in the art to assess its scope.

Claims 3-16 recite the limitation "The printing paper" in Claim 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 15-18 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hansen et al .

Hansen et al discloses a wet-laid sheet of cellulosic fibers to which a binder and particles are applied (Abs; col 1, lines 8-17). The binder can be selected from monosaccharides, disaccharides, urea and urea derivatives. Representative examples of mono- and disaccharides include glucose, sucrose, mannose and several other sugars (col 4, lines 23-15 and 56-63). Although maltose is not specifically listed, it

Art Unit: 1731

would also be an obvious functionally equivalent option. The binder can be present in an amount of 3 to 80% by weight and the particles can be present in an amount from 1 to 80% by weight. of the total weight of particles, fiber and binder (col 5, lines 28-35 and 62-65). Thus, for a composition of 3% binder, 1% particles and 96% fibers, the amount of binder applied is approximately 3.1% or 62.5 lb/ton of papermaking fibers. For all other disclosed compositions, the amount of binder is even greater. Numerous examples using aqueous compositions of the binders applied to the fibrous sheet are given wherein the binder concentration is from 10 to 50% (col 29, lines 64-66, Example IV; col 31, lines 30-32, Example VII and lines 65-67, Example IX; col 40, lines 5-6, Example XXIII and lines 40-42, Example XXV). Hansen et al discloses that the wet-laid sheet can be made into paper or other fibrous webs (col 3, lines 22-26), thus the binders are contemplated for use with papers as well as with the fibrous mats used in many of the examples. Hansen et al does not generally disclose the basis weight of the sheet; however, the instant Specification admits on p 1, lines 29-30 that printing paper has a basis weight from 16 to 180 lb/3300 ft². It would have been obvious to one of ordinary skill in the art to use the binder in a paper having the claimed basis weight as a typical paper weight.

The paper treated with the binders disclosed by Hansen et al is capable of having the claimed Cockle value because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure

recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. For the same reason, the binder compositions would have the claimed low viscosity and hygroscopicity.

Claims 1-8, 10-13, 15-18 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Owens, Jr (5107864) in view of Hansen et al.

Owens, Jr. discloses a wrapper for a smoking article comprising a cellulosic fiber sheet treated with alkali metal salts of citric acid and a mono- or disaccharide (Abs; col 2, lines 28-40; Claim 1). The citrate is present in an amount from 0.5 to 6% (10 to 120 lb/ton) of the paper and the mono- or disaccharide can be present in an amount from 1 to 10% (20 to 200 lb/ton). Examples are given using potassium citrate and sucrose (col 3, Table II, Note 4; col 4, Table III, Note 2). The paper has a basis weight of 25 to 100 g/m² (approx. 17 to 67 lb/3300 ft²) (col 2, line 25). The paper treated with the citrate salts and/or mono- or disaccharides disclosed by Owens, Jr. is capable of having the claimed Cockle value and water fastness for the same reasons given in the previous rejection.

Owens, Jr. does not disclose the viscosity or hygroscopicity of the additive. Hansen et al discloses application of water soluble coating materials at 10 to 50% concentrations to cellulosic webs.

The art of Owens, Jr, Hansen et al and the instant invention are analogous as pertaining to application of water soluble coatings to cellulosic webs. It would have been obvious to a person of ordinary skill in the art at the time of the invention to apply

Art Unit: 1731

the citrate salts and/or mono- or disaccharide in the claimed concentration range to the paper of Owens, Jr, in view of Hansen et al as a known and functionally equivalent option. It would have also been obvious to obtain the claimed low viscosity and hygroscopicity in the applied compositions.

Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moll, Jr et al (4093564).

Moll, Jr. et al discloses an example of paper comprising a coating of corn syrup (col 4, lines 15-25, Example 5). The corn syrup is applied at approximately 17% concentration (5 pts corn syrup to 25 pts water) and in an amount of 2.6 lb/ream. Using the typical values of 16 to 180 lb/3300 ft² for paper as Disclosed in the instant Specification, the amount of corn syrup applied to the paper is from 29 to 325 lb/ton of paper. The paper treated with the corn syrup disclosed by Moll, Jr. et al is capable of having the claimed Cockle value for the same reasons given previously.

Moll, Jr. et al does not disclose the viscosity or hygroscopicity of the additive. It would have been obvious to one of ordinary skill in the art to obtain the claimed viscosity or hygroscopicity of the corn syrup additive since the concentration is approximately the same as the solutions disclosed in the instant Specification.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Feibelman (2423556), Ritson et al (3532647), Hui et al

Art Unit: 1731

(5114999), Matthews et al (4461311), Nguyen et al (5667885)]. They pertain to other papers having coatings or treatments containing corn syrup or alkali citrate salts.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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